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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Title: A HOCKEY STICK BLADE  
Application No.: 10/772,316  
Applicant: Leo Sartor et al.  
Filed: February 6, 2004  
Art Unit: 3711  
Examiner: Mark S. Graham  
Confirmation No.: 6480  
Docket No.: **14610**

**REPLY BRIEF UNDER 37 C.F.R. 41.41**

Commissioner of Patents  
Alexandria VA 22313-1450  
U.S.A.

Sir:

The following is the Appellant's Reply Brief in response to the Examiner's Answer of July 26, 2007, and more specifically to the Examiner's response stated in paragraph (10) of the Examiner's Answer.

**Patentability of independent claims 1 and 31**

*Anticipation rejections based upon Lallemand and McGrath et al.*

In the Examiner's Answer, at page 5, the Examiner indicates: "*Appellant is of the opinion that because this thermoplastic layer 3 is of the same constitution as layers 1 and 2 it may not be considered a thermoplastic sheet as claimed. No support for this argument is given. To support such an argument the appellant would have to show that the definition of "sheet" is somehow limited to a layer of material which must be different that a layer of material which it adjoins.*"

*Clearly, the term “sheet” contains no such definition and therefore the argument must fail.”*

The Appellant respectfully submits that the Examiner’s position is totally unfounded.

First, layer 3 is not a “thermoplastic layer” as indicated by the Examiner. In Lallemand, the inventor clearly indicates that it is rather a mesh made of carbon fibers impregnated with resin (see Column 3, lines 63 to 68 and Column 4, lines 28 to 34 of Lallemand).

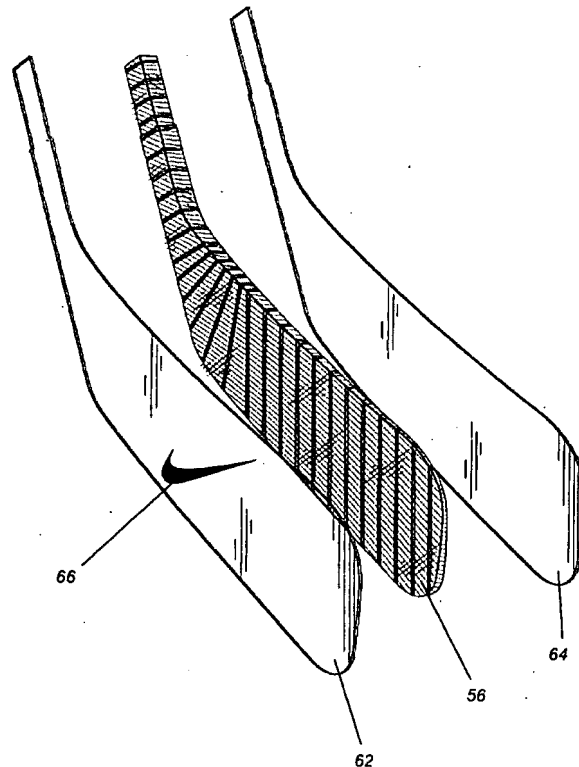
Second, contrary to the Examiner’s assertion, there is no need for a definition of the term “sheet”.

Claims 1 and 31 must be read in light of the Appellant’s patent application, including the figures, and with a mind that is willing to understand, rather than misunderstand.

For the reasons mentioned in the Appellant’s Amended Appeal Brief, from pages 9 to 11, a person skilled in art would never have identified a mesh of fibers impregnated with resin as being a sheet of thermoplastic material.

Moreover, from a reading of the Appellant’s patent application, a person skilled in the art would have necessarily understood that the claimed sheet of thermoplastic material is a further element of the blade, an element that covers the second layer of fibers, which forms part of the external surface(s) of the blade, and which is of a total different nature than the layers made of fibers impregnated with a suitable resin.

For more certainty, we reproduce, on the following page, Figure 10 of the Appellant’s patent application, which shows the claimed thermoplastic sheet (62; 64):



**Fig- 10**

Claims 1 and 31 further specify that “the sheet(s) form(s) part of the external surface(s) of the blade element for increasing the impact resistance of the blade.” In the Examiner’s Answer, at page 5, the Examiner indicates: “*All that the claim requires is that a thermoplastic sheet cover the second layer of fibers [...], and that it increase [sic] the impact resistance of the blade, which is an inherent result of having a layer or sheet 3 over layer 2.*” [emphasis added]

The Examiner’s assertion is unsustainable.

While the addition of a further layer may increase the rigidity of the blade, such addition may not necessarily increase its impact resistance, specially if the further layer is made of fibers, which are known to be brittle.

In order to determine whether the invention defined in claims 1 and 31 is patentable, the Examiner must step backward in time and put himself in the place of the person skilled in the art when the Appellant's invention was unknown and just before it was made. It is improper to use hindsight guided by the Appellant's patent application.

Nowhere in Lallemand and McGrath *et al.*, do the inventors disclose or suggest that the use of a sheet of thermoplastic material forming part of the external surface(s) of the blade can increase its impact resistance, as recited in claims 1 and 31.

In view of the above, the Appellant submits that claims 1 and 31 are clearly patentable over Lallemand and McGrath *et al.*

### **Patentability of independent claim 31**

#### *Obviousness rejection based upon Lallemand*

In the Examiner's Answer, at pages 6 and 7, the Examiner indicates: "*All that the examiner has take [sic] official notice of, and which has not been disputed, is that the foam and plastic materials being claimed are commonly known. As explained with regard to the anticipation rejections based on Lallemand, the use of a sheet of thermoplastic material is disclosed in the reference. While Lallemand did not disclose the specific claimed materials used for this sheet, or the foam in the blade, such are commonly known, and the examiner provided a motivation to use such materials.*" [emphasis added]

In the Final Action, at page 3, the Examiner indicated: "*Lallemand discloses the claimed device with the exception of the particularly claimed foam and thermoplastic. However, the examiner took official notice that the foam and thermoplastics claimed by applicant are commonly known and such is now admitted prior art.*" [emphasis added]

The Appellant totally disagrees with the Examiner's assertion to the effect that "thermoplastics claimed by applicant are commonly known and such is now admitted prior art."

While the Appellant agrees that blades having a foam core wrapped in meshes made of fibers impregnated with a suitable resin were part of the prior art, and while Lallemand suggests the use of thermoplastic resin in a resin transfer moulding process, for impregnating the meshes made of fibers, the use of thermoplastic sheets forming part of the external surfaces of such blades were not at all part of the prior art.


Again, Lallemand neither discloses nor suggests "front and rear thermoplastic sheets forming part of the front and rear external surfaces of the blade element for increasing the impact resistance of the blade", as recited in claim 31.

*A fortiori*, Lallemand does not at all disclose nor suggest "thermoplastic sheets made of thermoplastic material selected from the group consisting of polyethylene, polyurethane, polypropylene, polyester, polystyrene, polyvinyl chloride and cellulose acetate, as recited in claim 31.

In view of the above, the Appellant submits that claim 31 is clearly patentable over Lallemand.

For the foregoing reasons, it is submitted that the Examiner's rejections are not well founded, and reversal of his decision is earnestly solicited.

Respectfully submitted,

  
Ralph A. Dowell  
Registration No. 26,868

Date: \_\_\_\_\_

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DOWELL & DOWELL, P.C.  
Suite 406 -- 2111 Eisenhower Avenue

Alexandria VA 22314  
Telephone: (703) 415-2555  
Facsimile: (703) 415-2555